

ABSTRACT

To provide a honeycomb filter for cleaning an exhaust gas, which is excellent in heat resistance and thermal shock resistance and has high thermal decomposition resistance and high mechanical strength and which is thus capable of being used with stability at high and fluctuating temperatures, and a process for its production.

A honeycomb filter for removing solid particles containing carbon as the main component in an exhaust gas, characterized in that the material for the honeycomb filter is an aluminum titanate sintered product obtained by firing at from 1,250 to 1,700°C a raw material mixture comprising 100 parts by mass of a mixture (component X) comprising TiO_2 and Al_2O_3 in a molar ratio of the former/the latter being 40 to 60/60 to 40, and from 1 to 10 parts by mass of an alkali feldspar represented by the empirical formula $(\text{Na}_y\text{K}_{1-y})\text{AlSi}_3\text{O}_8$ (wherein $0 \leq y \leq 1$), an oxide having a spinel structure containing Mg, or MgO or an Mg-containing compound which will be converted to MgO by firing (component Y).